CLAIMS:

1. A method of executing tasks comprising:

dividing a unit time of processing in executing tasks by a processor into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness; and

skipping a task to be executed in the non-reserved band as appropriate when the processor falls in throughput.

2. The method of executing tasks according to claim 1, wherein an operating frequency of the processor is lowered when the processor or a peripheral circuit thereof exceeds a predetermined threshold in temperature.

3. The method of executing tasks according to claim 1, wherein an operating frequency of the processor is lowered depending on power consumption of the processor.

4. A task management method comprising:

classifying tasks to be executed by a processor into a first type and a second type depending on properties thereof; and

executing tasks of the first type while skipping a task of the second type to be executed between the tasks of the first type as appropriate if there is a possibility that real-timeness of processing is impaired by a predetermined factor.

5. The task management method according to claim 4, wherein:

the processor recognizes by a predetermined method that the task of the first type is one whose real-timeness must be

guaranteed; and

the processor recognizes by a predetermined method that the task of the second type is one whose real-timeness is not guaranteed.

6. A task management device comprising:

a switch instruction unit which issues an instruction to switch a plurality of tasks to be executed by a main processing unit; and

a detection unit which detects a throughput of the processor, wherein

the switch instruction unit divides a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and skips a task to be executed in the non-reserved band as appropriate when the main processing unit falls in throughput.

7. The task management device according to claim 6, wherein the detection unit detects an operating frequency of the main processing unit.

8. The task management device according to claim 6, further comprising an interpretation unit which interprets a requirement pertaining to real-timeness written in programs executed by the respective tasks, and wherein

the switch instruction unit allocates each of the tasks to either the reserved band or the non-reserved band based on the interpretation.

9. The task management device according to claim 6, further comprising a determination unit determines properties of the programs executed by the respective tasks, and wherein

the switch instruction unit allocates each of the tasks to either the reserved band or the non-reserved band based on the determination.

10. The task management device according to claim 6, wherein the unit time is one pertaining to display.

11. The task management device according to claim 6, further comprising a second detection unit which detects a usage rate of the main processing unit, and wherein

the switch instruction unit modifies a rate of execution of a task to be executed in the non-reserved band according to the usage rate.

12. The task management device according to claim 8, further comprising a second detection unit which detects a usage rate of the main processing unit, and wherein

the switch instruction unit modifies a rate of execution of a task to be executed in the non-reserved band according to the usage rate.

13. The task management device according to claim 9, further comprising a second detection unit which detects a usage rate of the main processing unit, and wherein

the switch instruction unit modifies a rate of execution of a task to be executed in the non-reserved band according to the usage rate.

14. The task management device according to claim 11, further comprising a table which stores information on a throughput of the main processing unit and the rate of execution of the task to be executed in the non-reserved band at the

throughput in association with each other, and wherein

when the usage rate of the main processing unit is lower than a predetermined threshold, the switch instruction unit makes the rate of execution of the task to be executed in the non-reserved band higher than the rate of execution set in the table.

15. A task management device comprising:

a switch instruction unit which issues an instruction to switch a plurality of tasks to be executed by a main processing unit; and

a detection unit which detects a throughput of the main processing unit, wherein

the switch instruction unit classifies the tasks to be executed by the main processing unit into a first type and a second type depending on properties thereof, and executes tasks of the first type while skipping a task of the second type to be executed between the tasks of the first type as appropriate if there is a possibility that real-timeness of processing is impaired by a predetermined factor.

16. A semiconductor integrated circuit comprising:

a main processing unit which executes predetermined tasks; and

a task management unit which divides a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and skips a task to be executed in the non-reserved band as appropriate when the main processing unit falls in throughput.

17. The semiconductor integrated circuit according to claim 16, further comprising a clock generation unit which supplies a

clock having a predetermined operating frequency to the main processing unit, and wherein

the task management unit skips a task to be executed in the non-reserved band as appropriate when the operating frequency falls.

18. The semiconductor integrated circuit according to claim 17, wherein the clock generation unit lowers the operating frequency when the main processing unit or a periphery thereof exceeds a predetermined threshold in temperature.

19. The semiconductor integrated circuit according to claim 18, wherein the clock generation unit lowers the operating frequency depending on power consumption.

20. The semiconductor integrated circuit according to claim 17, wherein the task management unit skips the task to be executed in the non-reserved band as appropriate when the main processing unit or a periphery thereof exceeds a predetermined threshold in temperature.

21. The semiconductor integrated circuit according to claim 17, wherein the task management unit skips the task to be executed in the non-reserved band as appropriate depending on power consumption.

22. A semiconductor integrated circuit comprising:

a main processing unit which executes tasks at a predetermined operating frequency;

a clock generation unit which supplies a clock having the operating frequency to the main processing unit; and

a circuit which realizes a task management function

dynamically by reading a program for realizing the task management function from exterior, wherein

the task management function includes dividing a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and skipping a task to be executed in the non-reserved band as appropriate when the operating frequency falls.

23. An electronic apparatus comprising:

a processor which executes tasks at a predetermined operating frequency; and

a storing unit which stores a program to be executed by said processor, wherein

the program makes the processor realize the function of dividing a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and scheduling tasks so that a task to be executed in the non-reserved band is skipped as appropriate when the operating frequency falls.

24. The electronic apparatus according to claim 23, further comprising a frequency control unit which lowers the operating frequency when the processor or a peripheral circuit thereof exceeds a predetermined threshold in temperature.

25. The electronic apparatus according to claim 23, further comprising a frequency control unit which lowers the operating frequency depending on power consumption.

26. A program for making a computer realize the function of dividing a unit time of processing in executing tasks by a processor into a reserved band for guaranteeing real-timeness

and a non-reserved band not for guaranteeing real-timeness, and skipping a task to be executed in the non-reserved band as appropriate when the processor falls in throughput.

27. A program for making a computer realize the function of classifying tasks to be executed by a processor into a first type and a second type depending on properties thereof, and executing tasks of the first type while skipping a task of the second type to be executed between the tasks of the first type as appropriate if there is a possibility that real-timeness of processing is impaired by a predetermined factor.

28. A task management system comprising:

a processor which executes tasks at a predetermined operating frequency;

a clock generation unit which supplies a clock having the operating frequency to said processor; and

a switch instruction unit which issues an instruction to switch a plurality of tasks to be executed by said processor, wherein

the switch instruction unit divides a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and skips a task to be executed in the non-reserved band as appropriate when the operating frequency of said processor falls.

29. The task management system according to claim 28, wherein the clock generation unit lowers the operating frequency when the processor or a peripheral circuit thereof exceeds a predetermined threshold in temperature.

30. The task management system according to claim 28,

wherein the clock generation unit lowers the operating frequency depending on power consumption.